



# Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271  
<http://dnr.state.il.us>

Pat Quinn, Governor  
Marc Miller, Director

May 4, 2012

Mr. Mike Grandy  
SIU-Edwardsville Campus  
Campus Box 1039  
Edwardsville, IL 62026

Mr. Tom Cissell  
Oates Associates  
100 Lanter Court, Suite 1  
Collinsville, IL 62234

**Re: North University Drive Resurfacing Project – SIU-Edwardsville Campus**  
**Endangered Species Consultation Program**  
**Project Number(s): 1208407**  
**County: Madison**

Dear Mr. Grandy and Mr. Cissell:

The Department received a submission from Oates Associates, via the Department's Ecological Compliance Assessment Tool (EcoCAT) website, on behalf of Southern Illinois University-Edwardsville, regarding this project in Sections 9, 15, and 16, Township 4 North, Range 8 East for consultation in accordance with the *Illinois Endangered Species Protection Act* [520 ILCS 10/11], the *Illinois Natural Areas Preservation Act* [525 ILCS 30/17], and Title 17 *Illinois Administrative Code* Part 1075.

The project involves the resurfacing of 6,500 feet of pavement and paving 7,650 feet of shoulder along North University Drive, and paving 3,250 feet of shoulder along East University Drive, which are located northeast and east of the main campus.

The project is located just east of a 2011 record of a State-listed threatened **Ornate Box Turtle**, *Terrepenne ornata*. The Department has completed its review of the project and determined that the action may have an adverse impact on Ornate Box Turtles, since this species inhabits an area close to the proposed road work. To minimize potential impacts, the Department recommends that SIUE incorporate the following measures in its project authorization.

## **Ornate Box Turtles**

This species was listed by Illinois as threatened in October 2009. Many populations have been adversely affected by habitat conversion to agriculture and development, road-kills, and over-collection for the pet trade. There is a recent record of this species close to the project footprint, but since it is a relatively small turtle (less than six inches) this animal can easily escape notice.

From late September through mid-April, the Ornate Box Turtle hibernates (brumates) in burrows as deep as

three feet underground. Such burrows are far from obvious to humans, so that for more than six months of the year, this species is not subject to easy observation. This species spends significant portions of each day underground, either in burrows or shallow excavations near the surface called “forms”. Hatchlings spend most of their time underground during their first two or three years of life. Excavation of soils, and vehicles and machinery moving about in potential habitat during the above-noted timeframe, run the risk of killing or injuring unobserved turtles.

This turtle’s daily pattern consists of an early morning emergence, followed by basking to raise its body temperature. When the right temperature for activity is achieved, it forages across its range for several hours, feeding, until temperatures become too high, then it seeks shelter beneath vegetation, in a burrow, or in a ‘form’. It remains inactive until late afternoon or early evening, when temperatures allow a second foraging period. Before darkness falls, it retreats to its burrow, except for females during the nesting period (May and June), when eggs are laid at night.

This species also demonstrates high fidelity to brumation sites, often returning to within a yard of where it spent the winter the previous year. If a brumation site is located where work is being conducted, it is unclear how a turtle will respond.

Noise generated by road work and excavation or trenching activities could interfere with animal communication and may hinder reproductive success, depending on its length and intensity. Vibrations from construction activities may pose another risk factor since reptiles are very sensitive to vibrations transmitted through the ground, as are earthworms and soil organisms, part of this turtle’s diet. Further, compaction of sandy soils can make it difficult or impossible for turtles to exit their burrows.

Because this species finds movement through dense vegetation difficult, it prefers areas where vegetation is sparse or absent. Roads satisfy this desire for easy movement, as do tilled fields, and also provide basking areas where temperatures may rise more quickly in the morning or during cooler weather. Most of the Department’s observation records for this species are adjacent to roads or are recorded road-kills.

*Recommendation #1.* The Department would like to stress that if Ornate Box Turtles are encountered during the construction phase, or during maintenance activities, there is the potential for incidental take to occur. If a population of the Ornate Box Turtle is confirmed within or near the project, work must immediately stop, and SIU-Edwardsville should consider obtaining Incidental Take Authorization from the Department’s Office of Resource Conservation, pursuant to 520 ILCS 10/5.5.

*Recommendation #2.* If any Ornates are encountered on or near the project’s footprint, immediately contact Mark Phipps, IDNR District Heritage Biologist, (618/462-1181, ext. 137) and Dr. Beth Walton, SIUE, 618/650-3623, *keeping in mind it is a criminal act for anyone to handle, or move, a listed species unless Incidental Take Authorization has been permitted.* Personnel on site should watch the species until the proper authority arrives to handle the situation.

*Recommendation #3.* All on-site personnel involved in the project should be educated on how to recognize this species. Color photos (of adults and juveniles) and educational materials regarding this species should be distributed, discussed at pre-construction meetings, and displayed at work zones. This species is usually only seen above ground from mid- April to late-September, outside of its brumation season.

*Recommendation #4.* Exclusionary silt fencing should be in place around the workzone by mid-March and maintained through October. Daily inspections (for the first two weeks, and weekly inspections thereafter) should be conducted during the construction period to ensure the fencing is properly installed and to check if turtles are present on either side.

*Recommendation #5.* Trenches and excavations dug as a result of this project should be covered at the end of each work day. Before starting work each day, trenches and excavations should be routinely inspected to ensure no turtles have fallen into, and become trapped, in them.

*Recommendation #6.* Vehicles and machinery should stay off any soils that are defined as sandy and use matting as additional compaction avoidance.

Consultation on the part of the Department is completed. In accordance with 17 Ill. Adm. Code 1075.40(h), Southern Illinois University - Edwardsville must notify the Department of its decision regarding these recommendations, whether they will:

- Allow the action to proceed as originally planned;
- Require the action to be modified per Department recommendations (please specify which measures if not all will be required); or
- Forgo the action.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resources review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected species are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this consultation review.

Cordially,



Kathi Davis  
Division of Ecosystems and Environment  
Impact Assessment Section  
Office of Realty & Environmental Planning  
217-785-5500

enclosure

cc: Mark Phipps, IDNR/Region IV/Natural Heritage  
Kent Boyles, IDNR/Region IV/Wildlife  
Beth Walton, SIUE-Geography Dept. and Environmental Sciences Program